

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
Inventor(s):
Krishnan Chari, et al.

Group Art Unit: 2871
Examiner: Phu Vu

TITLE

REFLECTIVE CHIRAL-NEMATIC
LIQUID CRYSTAL DISPLAY WITH
BROADBAND REFLECTION

Serial No.: 10/718,900

Filed: November 21, 2003

Commissioner for Patents
Alexandria, VA 22313-1450

RESPONSE UNDER 37 C.F.R. 1.116

Sir:

Claims 1-9 and 28-36 are pending in the application. Claims 1-9 and 28-36 have been rejected in the Office Action mailed March 22, 2007 and are presently active. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

The Examiner's comments together with the cited references have been carefully studied. Favorable reconsideration in view of the following remarks is respectfully requested.

Claims 1-3, 5-9, and 28-36 stand rejected under 35 U.S.C. 112, second paragraph. The Examiner states that the phrase "whereby a more color-neutral image area is provided when the image area is in the first reflecting state" is indefinite. The Examiner states that it references a comparison which is unclear. The Examiner's attention is directed to page 7, lines 17-20, of the present specification, which states:

By employing a mixture of two differently reflecting liquid-crystal materials in different populations of domains, in a monolayer, a broadband bi-stable display

having improved angle dependency and improved neutral reflection in the bright state can be obtained.

Thus, the improvement is with respect to the use of the mixture and the comparison refers to the use of the claimed mixture compared to no mixture.

Relying on 35 U.S.C. 102(b), the Examiner rejected claims 1-3, 5-9, and 28-36 as being anticipated by Yang.

This rejection is traversed. It appears that the Examiner does not understand the invention and the meaning of the words in claim 1. As stated in the previous rejection, Yang is disclosing something completely different. The present invention is directed to a mixture of differently colored domains in the same pixel, to obtain a more neutral color. An individual pixel contains the claimed mixture. In contrast, Yang involves differently colored domains in different pixels in order to obtain a multicolored display having pixels of different colors, not mixed colored domains in the same pixel. This is evident from a careful review of Yang. Figure 2 is described as a “multicolor bistable polymer dispersed cholesteric liquid crystal display” in col. 10, lines 24-25. Yang, in col. 10, lines 48-50, refers to “individual pixels of the multicolor polymer” which are formed by shining different doses of UV light to different pixels. Yang, in col. 5, lines 65-67, states “The cholesteric liquid crystals with different pitches ...were localized in the predetermined, selected pixels.” Yang refers to the photomicrograph of Figs. 9(a) to 9(d) as “a micrograph of pixels in a multicolor polymer dispersed cholesteric liquid crystal display cell.” Clearly, the pixels of Yang are of different colors, not neutral based on a mixture of colors.

The present claim 1 further states that the mixture is formed from an emulsion, which underscores that the differently colored domains cannot be in different pixels but must be in the same pixel, in an emulsion.

Applicants therefore respectfully request that the Examiner reconsider and withdraw the rejection of the claims under 35 U.S.C. 102(b).

Claim 4 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Faris. The rejection is traversed for the reasons stated in Applicants’ previous response..

Applicants have reviewed the prior art made of record and believe that singly or in any suitable combination, they do not render Applicants' claimed invention unpatentable.

In view of the foregoing remarks and amendment, the claims are allowable and such favorable action is courteously solicited.

Should the Examiner consider that additional amendments are necessary to place the application in condition for allowance, the favor is requested of a telephone call to the undersigned counsel for the purpose of discussing such amendments.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'C. Konkol', is written over a horizontal line.

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